

KORG



SIGNAL PROCESSOR SERVICE MANUAL **MS-03**

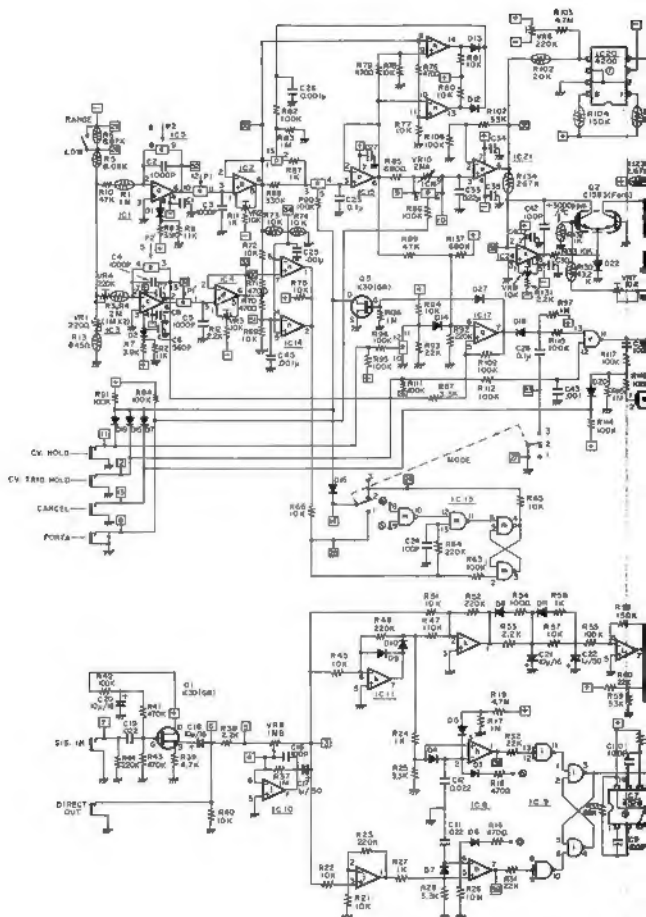
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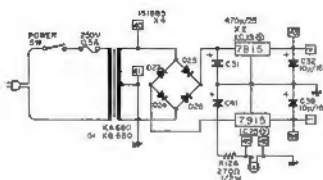
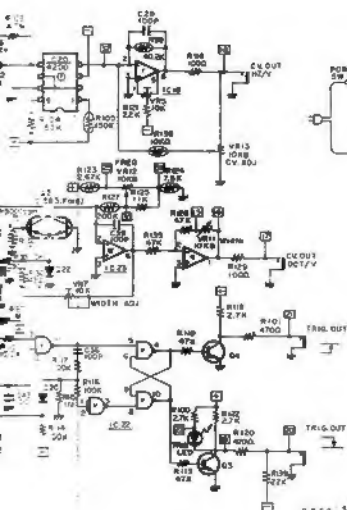
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1. SPECIFICATIONS

- | | |
|---|--|
| 1. CONTROL SECTION <ul style="list-style-type: none">● Input signal level● Range switch
(Low: 75 ~ 1400 Hz,
Hi: 150 ~ 2800 Hz)● Mode switch● Portamento time● CV hold● CV & Trig hold● Cancel switch● OCT/V frequency adjust
(± 800 cent)● OCT/V width adjust
(0.8 ~ 1.1V/OCT)● Power switch● Portamento switch | 2. INPUT & OUTPUT <ul style="list-style-type: none">● Signal In (auto pad system)
(line level ~ mic level)● CV out (Hz/V)● CV out (OCT/V)● Trig out $\neg L_{\text{arp}}$● Trig out $\neg f_{\text{arp}}$● Env. out● Direct out 3. INDICATOR (LED) <ul style="list-style-type: none">● Peak indicator● Trigger indicator 4. POWER CONSUMPTION <ul style="list-style-type: none">● 5W |
|---|--|

2. CIRCUIT DIAGRAM

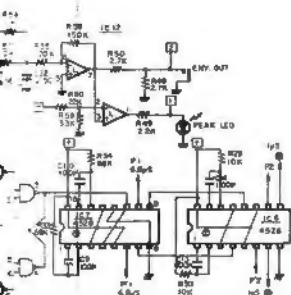




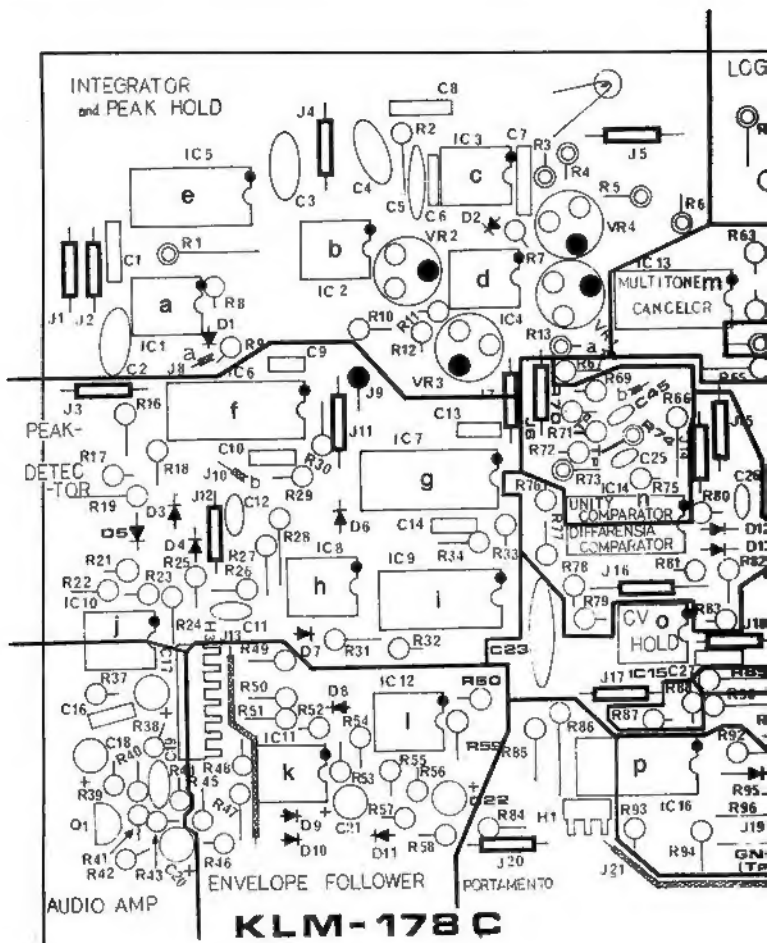
RESUME LOW

Freq	Tp 5.5V	Tp 35V	Hs/v	DCT/v
1KHz	0.75	1.50	0.00	3.50
500Hz	1.50	2.00	4.00	2.50
250Hz	5.00	4.00	2.00	1.50
125Hz	6.00	0.00	1.00	0.50

0.000 5140
 0.000 077
 0.000 4066
 0.000 072(002)
 0.000 339
 0.000 4011
 0.000 4008



3. PC BOARD



4. PARTS LIST

(Mechanical parts not listed)

● CARBON RESISTORS

not listed

● METAL FILM RESISTORS

1/4W 1% 845Ω	x	1
267kΩ	x	1
7.5kΩ	x	1
8.08kΩ	x	1
8.87kΩ	x	1
10kΩ	x	2
20kΩ	x	1
40.2kΩ	x	1
43.2kΩ	x	1
200kΩ	x	1
267kΩ	x	1
150kΩ	x	2
1MΩ	x	2
1MΩ	x	1

● FET

2SK 30A (GR)	x	2
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● DIODES

1S1655	x	1
1S1665	x	4

● LED

1S1665	x	2
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● LINEAR POSITIVE T.C. RESISTORS

1KΩ ± 3000 PPM/°C	x	1
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● CERAMIC CAPACITORS

50V 100pF	x	10
0.0047μF	x	8
580pF	x	1

● MYLAR CAPACITORS

50V 0.001μF	x	4
0.022μF	x	3
0.22μF	x	1
0.1μF	x	1

● POLYPROPYLENE

1000PF 100V G	x	4
0.1μF 200V M	x	1

● ELECTROLYTIC CAPACITORS

10μF 16V	x	5
470μF 25V	x	2
1μF 50V	x	2

● SEMI-FIXED RESISTORS

9R-19D 220ΩB 10%	x	1
10KΩ 10%	x	5
220KΩ 10%	x	2

● ROTARY VARIABLE RESISTORS

10KΩ EVH-CQAK 15B14	x	2
1MΩ EVH-CQAK 15B16	x	1
2MΩ EVH-CQAK 15A16	x	1

● SLIDE KNOB

Black LB	x	2
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● SLIDE SWITCHES

SSB-12202	x	1
SSB-12301	x	1

● SEESAW SWITCHES

1801-0121	x	1
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● FUSE

250V 0.5A	x	1
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● TRANSISTORS

2SC 1685(S)	x	2
2SC 1583F or Q	x	1

● IC

TL 071	x	5
072	x	1
CA3140E	x	4
RC4200	x	1
339	x	1
4011	x	3
MC14086	x	2
4528	x	2
4556	x	4
7815	x	1
7915	x	1

● PILOT LAMP

14V 0.04A	x	1
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● LAMP HOLDER

8FE-R	x	1
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● PC BOARD

KLM-178C	x	1
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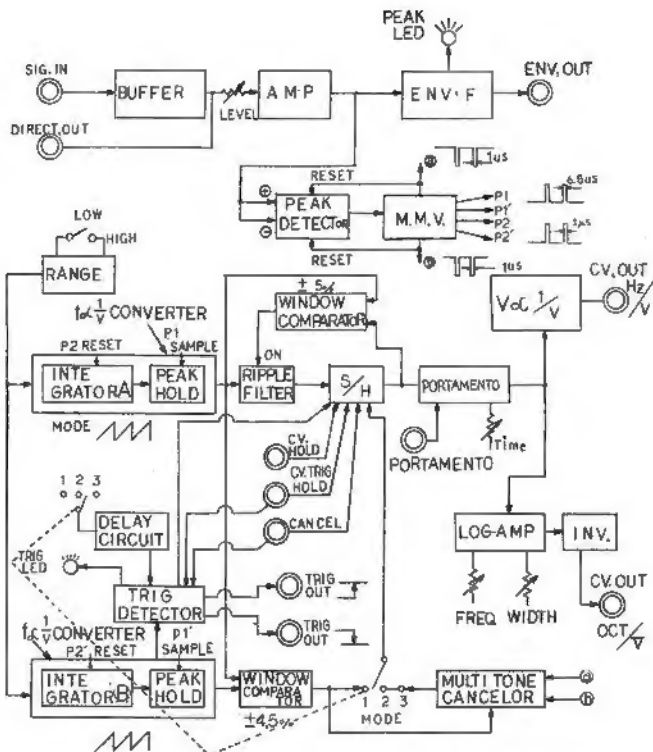
● CONNECTORS

MS-0301	x	1
MS-0302	x	1
MS-0303	x	1
MS-0304	x	1
TRC-100	x	1
3P	x	1
4P	x	1
7P	x	1
8P	x	1
9P	x	1

● POWER TRANSFORMER

KA880 100V, 220V, 240V	x	8
KB580 UL, CSA, 117V	x	2

5. BLOCK DIAGRAM



6. ADJUSTMENT PROCEDURE

Settings MS-03		
Sig In	←	WT-10A out or Freq. OSC
CV out	→	Digital voltmeter (4-1/2)
Range	→	Low
Peak	→	On
Settings WT-10A		
Sound/meter SW	→	Sound
Chromatic Dial	→	B
Meter	→	+ 20 cent

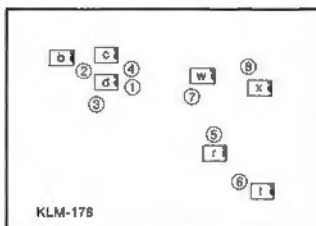


Fig. 1

- Turn CV OUT Hz/V ADJUST knob at the rear panel all the way clockwise to the KORG CV position.
- Please refer to fig. - 1 concerning Adjust Vr. No.
- The value indicated in () show you frequency and voltage which you get when you put Frequency OSC into the Sig. - In.
- Please refer to the circuit diagram regarding Test Point No. (TP).
- You must make adjustment again and again until you get the same value of Output Voltage indicated in the list below.
- Please note this adjustment process is mentioned when WT-10A is used.

	WT-10A OCT		TP	Digi.Vol. (4-1/2)		Adjust Vr. No.	Note	
Hz/V	(1 kHz)	H	18	(8.00V)	8.00V	6	Accuracy: - 10 cent + 5 cent	
	(500 Hz)	M	18	(4.00V)	4.00V	1		
	(250 Hz)	L	18	(2.00V)	2.00V	5		
OCT/V	(250 Hz)	L	17	(1.50V)	1.50V	Freq. Vr → 0		
	(1 kHz)	H	17	(3.50V)	3.50V	8		
	(500 Hz)	M	17	(2.50V)	2.50V	7		
Peak Hold-1	(125 Hz)	L	53	(6.00V)	3.00V	1		When you cannot make adjustment, please make it as indicated in the list on the left.
Peak Hold-1	(125 Hz)	L	34	(3.00V)	1.50V	1		
	(1 kHz)	H	34	(0.375V)	0.375V	2		
Peak Hold-2	(125 Hz)	L	33	(3.00V)	1.50V	4		
	(1 kHz)	H	33	(0.375V)	0.375V	3		
V OCT/V	(125 Hz)		35	(8.00V)		Check		
	(250 Hz)	L	35	(4.00V)	4.00V			
	(500 Hz)	M	35	(2.00V)	2.00V			
	(1 kHz)	H	35	(1.00V)	1.00V			